The Genus *Dicopus* Enock

(Hymenoptera: Mymaridae)

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A century has passed since Enock in England became interested in the Mymaridae. He quaintly described his initial fascination with these parasitic wasps as follows (1909): ". . . . . in 1872 I commenced my own observations from a simple exhibit by Mr. Frederick Fitch at the Quekett Microscopical Club. Under the microscope was shown 'A Fairy Fly in a Spider's Web.' It was illuminated on a black background, which gave it the most wonderful appearance, every limb, each tiny hair and the long cilia resembling brilliant silver. It was a most fascinating object to any one, and speaking for myself, I had never before seen anything to compare with its delicate fairy-like structure. I then and there determined to know more about its relatives. Next day I searched the spiders' webs in my garden at Holloway and found quite a number of several species, which I mounted in Canada balsam."

"On removal in 1882 to Woking I very soon found I was in the land of plenty for Mymaridae, which simply swarmed on the windows of the house and in a very small conservatory—where I caught seven of the new genera which I am introducing for the first time tonight." One of the new genera in the paper which Enock read to the Entomological Society of London was *Dicopus*. The type species is *Dicopus minutissimus* Enock which he described from a female, the male being unknown.

In 1911 A. A. Girault received a single male mymarid from Quebec "so minute as almost to be lost in the medium in which it was mounted." At first glance he thought it was an *Alaptus* but quickly recognized that it belonged to another genus and he made a very astute analysis (1911): "There is an English genus, however, recently described by Enock for *Dicopus minutissima* Enock, which closely resembles *Alaptus* Haliday in form, but which differs in bearing two more antennal segments; the male of this genus is unknown. Now, this Canadian species precluded from being an *Alaptus* must belong to *Dicopus*, at least until we know to the contrary. It is one of the smallest North American Mymaridae and because of this and also because of its characteristic appearance, I believe it is incumbent on me to describe it rather than risk its being lost." This single male individual, the type of *Dicopus halitus* Girault, was the sole record for the genus on the North American continent until the specimens described herein were collected in California.

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In September 1911, while en route to Australia, Girault stopped for a few hours at Suva, Fiji and he "managed to collect a few parasitic Hymenoptera." One of these was captured on a window pane in a woodworker's shop. Girault recognized it as a male *Dicopus* and named it *D. psyche.* "This Fijian species, like the American form, is very minute, also extremely delicate, and was extraordinarily difficult to capture; it was moving slowly over the pane of a window, but I was not able to keep sight of it for more than the fraction of a second at a time. This fact, taken in conjunction with its fragility, made it necessary to spend three-quarters of an hour in effecting its capture." (Girault, 1912).

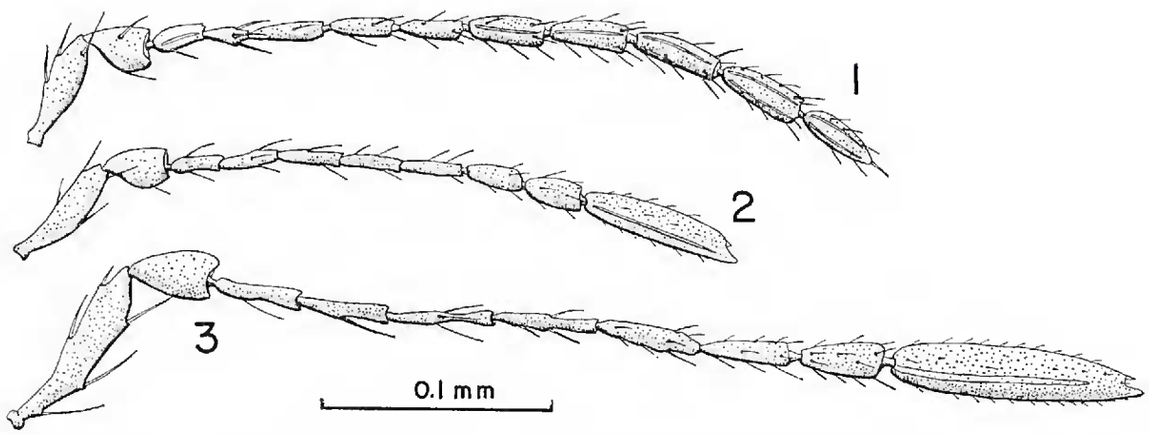
In 1912 Ricardo Mercet described *Dicopus citri* from Spain, and Girault later added 3 Australian species by describing *D. victoria* and *D. maximus* in 1920, and *D. bidentiscapus* in 1931. Also in 1931 Claude Morley in England described *D. cervus* from a male hymenopteran which ". . . . . flew on to the book I happened to be reading at 5 p.m. on July 17th, 1921, while sitting upon the lawn beside the moat which surrounds Monks' Soham House in Suffolk."

This extraordinary detailed collection datum for a mymarid was rendered ineffectual in 1955 when Alejandro Ogloblin indicated that *D. cervus* Morley is not a mymarid. In the same paper Ogloblin proposed four new genera from Argentina all closely related to *Dicopus.* These are *Chromodicopus*, *Callodicopus*, *Dicopulus* and *Dicopomorpha.* Ogloblin suggested that some of the species referred to *Dicopus* by Mercet and Girault might possibly be transferred to other genera. From my examination of Girault's types at the Queensland Museum I believe that *D. victoria* Girault and *D. maximus* Girault are incorrectly placed in *Dicopus* and instead probably belong to one of Ogloblin's genera or to a closely related but undescribed genus.

The genus *Dicopus* is therefore presently constituted of *D. minutissimus* Enock, *D. halitus* Girault, *D. psyche* Girault, *D. citri* Mercet, *D. bidentiscapus* Girault and the California species described as follows:

Dicopus pygmaeus, new species

Female.—Body length 0.22 mm; forewing length 0.44 mm; wing blade 0.30 mm, apical marginal cilia 0.14 mm; head, thorax, abdomen brown, appendages pale testaceous, eyes and ocelli deep maroon. Toruli high on face near frontal carina of vertex; mandibles elongate. Vertex finely granulate, lateral carinae well developed, thick, interrupted, in 3 sections. Face with several prominent bristles. Antennae 1.5 × body length. Funicle segments 6, 7 distinctly wider than preceding funicle segments, club elongate with 2 terminal projections (Fig. 2). Abdomen sessile, mesophragma penetrates ½ its length, ovipositor short, not exserted. Legs



FIGS. 1–3. Antennae. 1. *Dicopus pygmaeus* male. 2. *D. pygmaeus* female. 3. *D. enocki* female.

longer than body, fore femora and tibiae slightly swollen, fore coxae largest. Foretarsus with basal segment barely exceeding segment 2, apical segment (5) longest.

Male.—Similar to female in size and color. Antenna (Fig. 1) 12 segmented, funicle segments 6, 7, 8, 9 largest, widest; club with terminal spine. Hind trochanters elongate.

Holotype female, MECCA, IMPERIAL COUNTY, CALIFORNIA, on sugar beet, 19 June 1964, H. R. Moffitt. Allotype, same data as holotype except collected 21 May 1964. Types at Division of Biological Control, University of California, Albany.

The male antenna of *D. pygmaeus* is similar to *D. halitus*, but the terminal spine of the club and the elongate hind trochanters are distinctive. There are also color differences as *D. halitus* is sooty black. The female of *D. halitus* is unknown.

Dicopus enocki, new species

Female.—Body length 0.35 mm; forewing length 0.73 mm; wing blade 0.46 mm, apical marginal cilia 0.27 mm. Head, thorax, abdomen brown; legs and antennae light brown; eyes red. Scutum, postscutellum lightly reticulate; scutellum, propodeum smooth. Head large, as wide as thorax. Vertex with gross carinae. Mandibles elongate, single toothed. Toruli high on face, near frontal carina of vertex. Scape long with two distinct tooth-like projections bearing spines on ventral aspect (Fig. 3). Funicle segments 1–6 slender, elongate; segment 7 shortest, widest. Club elongate with 2 terminal projections. Legs slender; fore coxae largest; foretarsus with basal segment distinctly longer than segment 2. Mesophragma penetrates ⅓ abdomen; ovipositor short, not exserted.

Male.—Unknown.

Holotype female, KINGSBURG, FRESNO COUNTY, CALIFORNIA, suction trap in vineyard, 23–24 April 1965, J. Nakata; 2 paratype females same data as holotype except collected 15–16 May 1965 and 25–26 April 1965; 1 ♀ paratype; Caswell State Park, Stanislaus County, California, on *Rubus*, 29 April 1963, R. L. Doutt. Type series at Division of Biological Control, University of California, Albany.

D. psyche Girault is similar to *D. enocki* but differs by the lack of tooth-like projections on the scape and a wider funicle segment 6. *D. pygmaeus* differs in its antennal structure (compare Figs. 2 and 3), in its shorter basal segment of the foretarsus, and in the larger development of the mesophragma. The name *D. enocki* is in centennial recognition of the contributions of Enock to the study of Mymaridae.

LITERATURE CITED

ENOCK, F. 1909. XI New genera of British Mymaridae. Trans. Entomol. Soc. London, 1909, pt IV, 449–459.

GIRAULT, A. A. 1911. The probable occurrence of the Mymarid genus *Dicopus* Enock in North America (Hymen.). Entomol. News, 22: 347–349.

GIRAULT, A. A. 1912. On the probable occurrence of the Mymarid genus *Dicopus* Enock in Fiji. Proc. Entomol. Soc. Wash., 14: 22–23.

GIRAULT, A. A. 1920. New genera and species of Australian Mymaridae. Insec. Inscit. Menstr., 8: 96–100.

GIRAULT, A. A. 1931. A new habit in an old insect. *Homo pudicus* and new Eurytomidae. Privately published, Brisbane, 4 pp.

MERCET, RICARDO. 1912. Mimáridos nuevos de España. Boll. R. Soc. Esp. Hist. Nat., Madrid, 12: 331–337.

MORLEY, CLAUDE. 1931. New *Oxyura* from Britain. The Entomologist, 64(812): 14–16.

OGLOBLIN, ALEJANDRO. 1955. Los nuevos representantes de la famn. Mymaridae (Hym.) de la Republica Argentina. Boll. Lab. Zool. Gen. Agr. Filippo Silvestri, Portici, 33: 377–397.

RECENT LITERATURE

CERAMBYCIDAE OF NORTH AMERICA. PART VI, NO. 1. TAXONOMY AND CLASSIFICATION OF THE SUBFAMILY LEPTURINAE. E. G. Linsley and J. A. Chemsak, University of California Publications in Entomology, 69: 1–138, 1973.

The excellence of the first five volumes is continued in this work which treats the tribes Desmocerini and Necydalini, along with a portion of the Lepturini. As in the preceding parts, the text is well illustrated with habitus drawings and distributional maps.—*Editor.*